



(43) International Publication Date
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number
WO 2005/069204 A1

(51) International Patent Classification⁷: G06K 19/00,
H01L 27/04, 21/768

(21) International Application Number:
PCT/JP2005/000445

(22) International Filing Date: 11 January 2005 (11.01.2005)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) Priority Data:
2004-008752 16 January 2004 (16.01.2004) JP

(71) Applicant (for all designated States except US): SEMI-CONDUCTOR ENERGY LABORATORY CO., LTD.
[JP/JP]: 398, Hase, Atsugi-shi, Kanagawa, 2430036 (JP).

(72) Inventors; and

(75) **Inventors/Applicants (for US only):** **ARAI, Yasuyuki**
[JP/JP]; c/o SEMICONDUCTOR ENERGY LABORA-
TORY CO., LTD., 398, Hase, Atsugi-shi, Kanagawa,

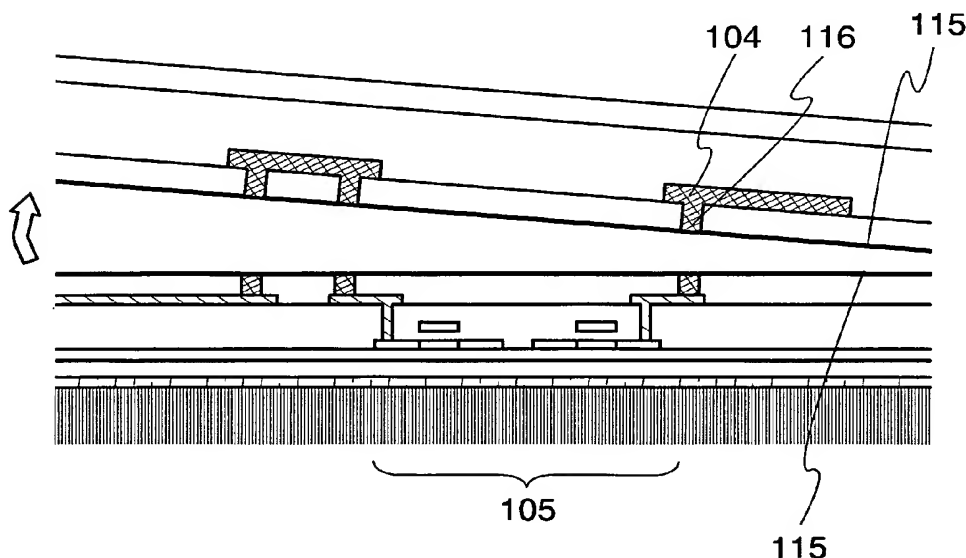
2430036 (JP). **AKIBA, Mai** [JP/JP]; c/o SEMICONDUCTOR ENERGY LABORATORY CO., LTD., 398, Hase, Atsugi-shi, Kanagawa, 2430036 (JP). **TACHIMURA, Yuko** [JP/JP]; c/o SEMICONDUCTOR ENERGY LABORATORY CO., LTD., 398, Hase, Atsugi-shi, Kanagawa, 2430036 (JP). **KANNO, Yohei** [JP/JP]; c/o SEMICONDUCTOR ENERGY LABORATORY CO., LTD., 398, Hase, Atsugi-shi, Kanagawa, 2430036 (JP).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: SEMICONDUCTOR DEVICE



(57) Abstract: The invention provides a semiconductor device which can reliably restrict transmission/reception of signals or a power source voltage between a reader/writer when peeled off after stuck to an object. The semiconductor device of the invention includes an integrated circuit and an antenna formed on a support base. In the semiconductor device of the invention, a separating layer which is overlapped with the integrated circuit and the antenna sandwiching an insulating film is formed on the support base. A wiring for electrically connecting the integrated circuit and the antenna, a wiring for electrically connecting semiconductor elements in an integrated circuit, or a wiring which forms the antenna passes through the separating layer.

WO 2005/069204 A1



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*